

# The Des Moines Register

TODAY IN SPORTS

## PREP PLAYOFFS: ROUND 2

The postseason continues tonight across the state



PAGE 7C: EXTENDED PREVIEWS OF METRO'S CLASS 4-A GAMES



CHECK OUT  
HALLOWEEN  
EVENTS FOR  
THE ENTIRE  
FAMILY  
TODAY IN  
IOWALIFE

MONDAY, OCTOBER 29, 2012 | THE NEWS IOWA DEPENDS UPON | DESMOINESREGISTER.COM | METRO EDITION

NETT COMPANY

### DEAD ZONE

#### A REGISTER SPECIAL REPORT

A look at the tension between Iowa's nation-leading corn industry and the shrimpers, oystermen and crabbers of the Gulf of Mexico

## Some call for tougher fertilizer regulations



Dave Nelson of Nelson Family Farms and Brokaw Supply runs a field implement demonstration of strip tillage near Boone. It only disturbs the soil between old rows, placing nutrients where they are needed. RODNEY WHITE/THE REGISTER

## Iowa preparing report that details plans to cut sewage plant runoff

BY PERRY BEEMAN | pbeeman@dmreg.com

There are things Iowa farmers and other landowners can do to reduce the flow of nitrate pollution into the Mississippi River and, eventually, into the Gulf of Mexico. But some possible solutions have been repeatedly side-tracked by cost, political stalemates and uncertainty over what benefits, if any, would result in the Gulf if measures to reduce fertilizer runoff from farm fields and other sources of pollution were in place across the Midwest farm belt. Scientists say those hurdles might still be cleared, provided funding can be found and agricultural interests, government and other groups are willing to work together. Iowa State University researchers last month released a study detailing cropping practices that could cut fertilizer runoff by as much as 90 percent. And a federal

See ZONE, Page 8A

### DIGITAL EXCLUSIVES

Online at [DesMoinesRegister.com/deadzone](http://DesMoinesRegister.com/deadzone):

**VIDEO EXPLANATIONS** of the issues surrounding the dead zone off the coast of Louisiana and of scientist Nancy Rabalais explaining hypoxia and its effect.

**SEE 71 PHOTOS** from the areas affected by the dead zone.

**READ SUNDAY'S STORIES** on the dead zone.

### MORE INSIDE

**SOLUTIONS:** Find out what Iowa ag producers are doing to help reduce the dead zone. Page 9A

## Absentee ballot issues reported

It's unclear if problems in 2 counties are isolated

By Jennifer Jacobs

jejacobs@dmreg.com  
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Muscatine resident Craig White says a Democratic campaign worker somehow gave his 75-year-old mother the impression that it was OK for her to sign his name on an absentee ballot request form when he wasn't home.

It's a felony under Iowa's voting laws to falsify a signature.

"It shocked me, and it really almost made me change my vote," said White, a Democrat. "As far as I'm concerned, my civil rights were violated."

Elsewhere, reports of unauthorized absentee ballot paperwork have led to an investigation by the Iowa Division of Criminal Investigation.

Floyd County Attorney Normand Klemesrud, a Democrat, said the DCI is checking into cases in his county in which someone allegedly filled out the request paperwork for an absentee ballot without the voter's consent or knowledge. Chari Paulson, the DCI's assistant director, didn't return phone calls

See FRAUD, Page 9A

### HOW VOTERS COULD BE AFFECTED

Iowans who receive an absentee ballot in the mail that they didn't sign paperwork to receive, or who are suspicious of other forms of election misconduct, are encouraged to contact local law enforcement officials or the Iowa Division of Criminal Investigation at 515-725-2629.

By law, Iowans must surrender their absentee ballots to their county auditor if they want to vote by regular ballot on Nov. 6. If someone loses or disposes of an absentee ballot, for example by not recognizing its significance and throwing it away, extra steps will be required on Election Day to enable voting. Poll workers will need to confirm with the county auditor that no absentee ballot had been returned for that voter.

## Campaign 2012 Analysis: Obama holds advantage in electoral vote hunt

By Thomas Beaumont  
Associated Press

AMES, Ia. — President Barack Obama is poised to eke out a victory in the race for the 270 electoral votes needed to win re-election, having beaten back Republican Mitt Romney's attempts to convert momentum from the debates into support in all-important Ohio, according to an Associated Press analysis a week before Election Day.

While the Democratic incumbent has the upper hand in the electoral vote hunt, Romney has pulled even, or is slightly ahead, in polling in a few pivotal states, including Florida and Virginia. The Republican challenger also appears to have the advantage in North Carolina, the most conservative of the hotly contested nine states that will determine the winner.

While in a tight race with Obama for the popular vote, Romney continues to have fewer state-by-state paths than Obama to reach 270. Without Ohio's 18 electoral votes, Rom-

See VOTES, Page 9A

### Hurricane Sandy

## Northeast U.S. braces for a beating

Landfall in the mid-Atlantic area could occur tonight. Major evacuations are in motion.

By Allen G. Breed  
and Jennifer Peltz  
Associated Press

NEW YORK — From Washington to Boston, cities and towns Sunday buttoned up against the onslaught of a superstorm that could endanger 50 million people. Forecasters warned that the New York area could get the worst of it — an 11-foot wall of water.

"The time for preparing and talking is about over," Federal Emergency Man-

agement Administrator Craig Fugate said as Hurricane Sandy made its way up the Atlantic on a collision course with two other weather systems. "People need to be acting now."

Forecasters said the hurricane could blow ashore tonight or early Tuesday along the New Jersey coast, then cut across into Pennsylvania and travel up through New York state Wednesday.

Airlines canceled more

See SANDY, Page 5A



Waves break against a bulkhead Sunday in the Brigands Bay area of Frisco, N.C. STEVE EARLEY/ASSOCIATED PRESS

High 52° Low 32°  
Partly cloudy.  
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# DEAD ZONE

“Everybody wants to manage nutrients the best way. No one wants to pay for them to go somewhere else. ... There’s things we can do to help, but I don’t know if we ever get to the point that we completely fix it.”



**KEVIN ROSS,**  
farmer, of  
Underwood, Ia.

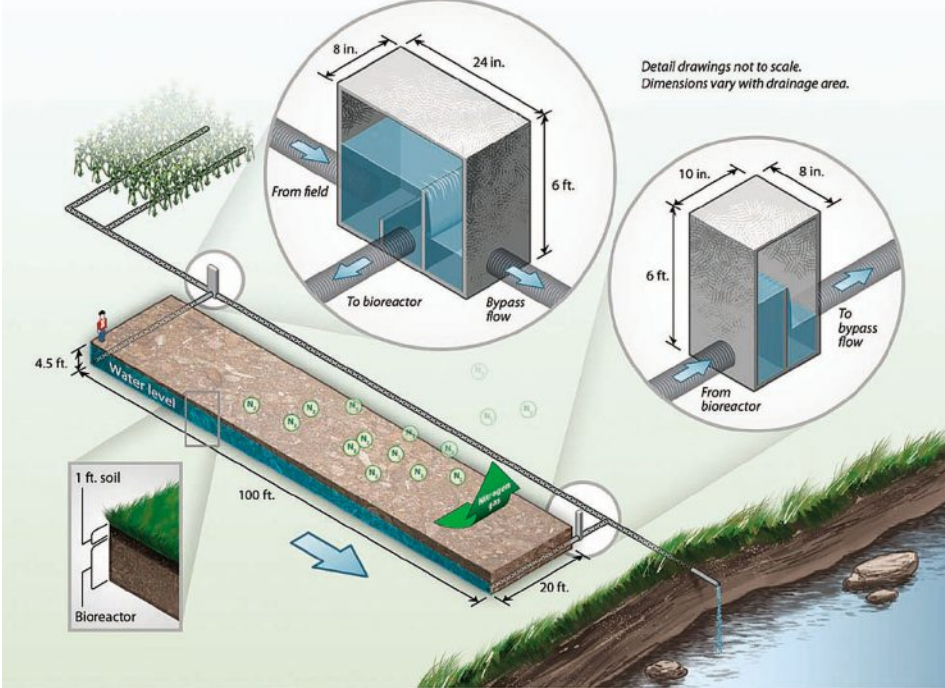


Iowa State University researchers last month released a study detailing cropping practices that could cut fertilizer runoff by as much as 90 percent. HOLLY MCQUEEN/REGISTER FILE PHOTO

## STRATEGIES TO REDUCE THE DEAD ZONE

### Cleaning water with buried wood chips

Scientists say that bioreactors are among the most promising of techniques to reduce runoff. The Iowa Soybean Association is among those looking into the use of bioreactors to ease the Gulf’s pain. Basically, these are pits with wood chips or other organic material. As water works its way through, natural processes remove nitrogen from water. ISU estimates the reactors could cut nitrate runoff by 43 percent.



Source: Used with permission from Iowa State University Extension and Outreach; Woodchip Bioreactors for Nitrate in Agricultural Drainage (2011, PMR 1008), by Laura Christianson and Matthew Helmers

THE REGISTER

## ZONE

Continued from Page 1A

al hypoxia task force joined farmers from across the U.S. at ISU’s Boone research farm, where GPS-assisted fertilizer application systems and other devices demonstrated how technology could help farmers save money and minimize pollution.

In the next month or so, Iowa’s natural resources and agriculture departments will release a long-awaited report detailing plans to reduce fertilizer runoff as well as nitrate and phosphorus pollution from sewage treatment plants.

Environmental watchdogs hope the plan will lead not only to cleaner lakes and streams in Iowa, but also address the state’s role as the nation’s second-leading source of nitrates entering the Gulf.

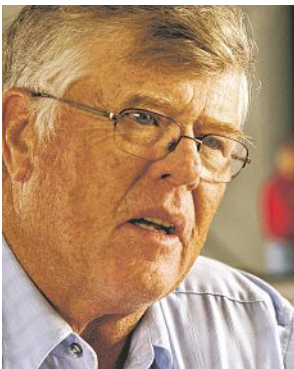
Nitrate pollution, largely the result of fertilizer runoff, is carried by the Mississippi River and its tributaries to the Gulf. The result is massive algae blooms, which die and consume oxygen as they decay. Huge stretches of Gulf waters each summer are unable to sustain aquatic life — a condition known as hypoxia.

That’s had profound consequences in Gulf Coast states such as Louisiana, where shrimping and other commercial fishing operations are part of a \$660 million regional industry.

Decades of voluntary actions by farmers to save soil and prevent fertilizer runoff have failed to significantly improve water quality in Iowa or the Gulf, environmentalists say. Some groups are calling for tougher state and federal regulations to limit how much fertilizer can be applied to fields — and when.

Farmers and their organizations insist such a strategy is unworkable, in part because farms, cropping techniques, soil and even climate vary from county to county.

Nancy Rabalais, executive director of the Louisiana Universities Marine Consortium, one of the foremost marine research centers in the U.S., is frustrated by the slow pace of progress in Iowa and other farm belt states. She calls efforts to address the problem “minimal, ineffective, and stymied by the inertia of a complex, multi-jurisdictional quagmire.”



**Dennis Friest of Garden City can sometimes get 35 to 45 more bushels an acre while using 35 to 45 fewer pounds of nitrogen per acre.** RODNEY WHITE/THE REGISTER

Rabalais says some farmers working the soil in the Mississippi River watershed are doing their best to keep nutrients on their land and out of the waterways. But she said many of those are smaller acreage operations.

“If these sorts of best management practices could be used across the board, and everybody worked really hard to meet them — everybody — then I think we can make some progress,” said Rabalais, whose research into Gulf hypoxia earned her a MacArthur Foundation “genius” grant earlier this month. “Progress is going to be slow because it took a long time for this to develop.”

At the same time, climate change models suggest rainfall changes might make the issue even hotter.

Iowa State University climate researcher Eugene Takle said computer models predict increased rainfall by mid-century. A 24 percent increase in precipitation would mean 35 percent more water running through tiled farm fields and into streams. A 32 percent jump would send 80 percent more water through the drainage systems, he said.

Susan Heathcote, a water quality specialist for the nonprofit Iowa Environmental Council, believes it may be time to require fertilizer-management plans of farmers, similar to the manure-management plans already required of many livestock producers.

Craig Cox, senior vice president of the national nonprofit Environmental Working Group, agrees that voluntary programs aren’t the answer. “We think it should be clear that solely relying on voluntary approaches isn’t working,” said Cox. “We’ve been doing this for 70 years. It isn’t enough.”

States do have the abili-

ty to set and enforce their own rules and regulations.

For example, Minnesota bans crops within 50 feet of stream banks. But the federal Clean Water Act does not regulate runoff pollution. And few state or federal officials have wanted to take on the agriculture lobby, a powerful force nationally, particularly in Iowa — the nation’s top producer of corn, soybeans, eggs and pork.

Farmers insist it would be hard to write regulations that fit every farm, and the laws almost certainly would invite long court battles.

“Instead of being tied up in court for years, let’s get something done on the land,” said Iowa Agriculture Secretary Bill Northey, a member of the team drafting the state’s plan to reduce nitrate runoff. “We need to focus on what’s good for our farmers.”

The Iowa Farm Bureau Federation has taken a similar stand, noting that farmers have taken steps to reduce erosion and are beginning to use technology such as GPS systems and yield monitors to help them more precisely apply fertilizer.

Garden City corn grower Dennis Friest, 66, also opposes the call for tougher regulations. But he adds: “We as farmers need to look at lessening our footprint on the Gulf.”

He’s doing his part. Friest regularly experiments with different fertilizer techniques. In some cases, he gets 35 to 45 more bushels an acre while using 35 to 45 fewer pounds of nitrogen per acre.

Voluntary efforts such as those seem the most likely solutions, given the political and legal implications. Such an approach in the Chesapeake Bay area, another dead zone, appears to have helped at least a little, a recent study by Johns Hopkins University and the University of Maryland has found.

But Peter Weyer, a researcher at the University of Iowa’s Center for the Health Effects of Environmental Contamination, isn’t sure that will be enough.

His research has raised questions about whether nitrate pollution from corn fertilizers poses a health threat to humans at levels far below the current federal standard.

“The Midwest and Iowa and Illinois contribute a huge amount of nitrogen that goes down there,” said Weyer, referring to the Gulf. “What do you do to at least put the brakes on?”

## STATE NUTRIENT MANAGEMENT STRATEGY

A lot of the nitrate flow to the Gulf has been traced to field tiles, essentially drainage pipes that catch rain after it runs through fertilized soil. Nitrate concentrations in the tiles often exceed the drinking water standard.

Dean Lemke of the Iowa Department of Agriculture and Land Stewardship estimates that about 40 percent of the state’s 23 million acres of cropland has the below-ground drainage pipes, which empty into channels that eventually dump into creeks and rivers.



**Matt Helmers**

Iowa State University agricultural engineer Matt Helmers said the state’s plan will include a review of research into what farming techniques can best reduce fertilizer runoff. Others from the Iowa Department of Agriculture and Land Stewardship and the Iowa Department of Natural Resources are working on strategies to limit pollution from sewage-treatment plants, and on policy questions related to nutrient management.

## REGULATIONS

The U.S. Environmental Protection Agency continues to push states to set limits for nitrogen and phosphorus for lakes, reservoirs, rivers and wetlands. That progress has been slow. Farm groups note that there is little hard evidence cutting back on runoff will fix the dead zone problem, or even reduce it significantly.

EPA reported in 2008 that half the states didn’t have any numeric standards for nitrogen and phosphorus. And there is little evidence that those that do are willing to tell farmers how much fertilizer they can apply.

State lawmakers and regulators have said the idea of regulating the applications is dead on arrival, politically.

## COVER CROPS

Biologists for years have suggested that farmers plant hay, oats, barley, rye and other crops to hold soil when corn and soybeans aren’t growing. “They aren’t very prevalent,” said Bill Northey. However, the state’s agriculture secretary, who farms in Dickinson County, said interest may be growing.

Cover crops can reduce nitrate runoff sharply, Iowa State University researchers found. Data released earlier this month said planting rye after corn is harvested would cut nitrogen runoff by 31 percent. Farmers often kill the crop with chemicals and let the organic matter work into the soil when it’s time to plant corn or soybeans. Some graze cattle on the land.

“We would like to get some money to get people to do some of these practices,” Northey said.

## POLLUTION-TRADING

Ohio, Kentucky and Indiana recently signed the first interstate pollution trading program for nutrient runoff. Basically, if a sewage treatment facility, power plant or other source of nutrient pollution is having difficulty meeting its limits, it can pay a farmer to restore wetlands or take other steps to reduce nitrogen and phosphorus pollution on his own property. The result is a net reduction in runoff, regardless of where it occurs.

For example, farmers could be paid perhaps \$500 to \$5,000 year to keep cattle out of waterways, cut fertilizer applications or install wetlands or buffers.

## FERTILIZER CUTS

American Farmland Trust runs a pilot program that pays farmers in some states, including Iowa, if they lose yield or income when attempting to grow the same amount of corn with less fertilizer.

## FERTILIZER TIMING

Environmentalists encourage farmers to fertilize in the spring, with no fall applications. The conventional wisdom is that less nitrogen would get away with spring applications only. But Northey notes that businesses couldn’t deliver enough nitrogen, as it stands today, if all had to be applied in the spring. And a new ISU report estimates changing from fall to spring applications would reduce nitrate runoff by just 6 percent.

## CONSERVATION RESERVE

Groups ranging from Environmental Working Group to Pheasants Forever have suggested that converting more marginal cropland to habitat would help clean waterways from Iowa to the Gulf.

But Congress has suggested sharp cuts in the program in the new farm bill, possibly capping enrollment at 25 million acres instead of 32 million acres, the cap now in place.

“We think cuts to conservation programs are unnecessary, unwise and couldn’t come at a worse time,” said Craig Cox, the Environmental Working Group vice president. “We are putting unprecedented pressure on soil, water and farmland.”

Cox said Iowa’s CRP acres fell to 1.65 million this year, down from 1.97 million in 2007. At the same time, Iowa lost 1.5 million acres of grassland and wetlands.

ISU estimates wetlands on the edge of fields cut nitrate runoff by 52 percent; buffers could cut it by 91 percent.

Converting fields to grasses and the like permanently would reduce the runoff by 85 percent, ISU researchers estimated.

A combination of several conservation practices on the same farm might be the best approach, they said.



This is a Hagie Manufacturing boom for sidedressing liquid nitrogen later in the season, seen at the Iowa State BioCentury Research Farm near Boone. RODNEY WHITE/THE REGISTER